

IN THE ABSTRACT

✓ Please replace the abstract as follows:

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Zipper is the time-synchronized frequency-division duplex implementation of discrete multi-tone (DMT) modulation. Two communicating Zipper modems transmit DMT symbols simultaneously with a common clock. ~~The Zipper scheme implies that every carrier, in the total set of carriers in the DMT signal, is exclusively chosen to be used for either the up-stream or the down-stream direction.~~ When all transmitters are time synchronized, the near end cross-talk (NEXT) and near end echoes injected into the received signal are orthogonal to the desired signal. The present invention provides ~~[[s]]~~ a telecommunications transmission system using zipper and having at least two VDSL systems. Each ~~[[of]]~~ VDSL system comprises a pair of zipper modems communicating over a cable transmission path. ~~The two VDSL systems employing a common cable.~~ The telecommunications transmission system ~~is adapted to:~~ handles zipper transmission transmitted over the common cable; at least partly mitigates NEXT; and permits transmissions in a first VDSL system which are asynchronous with transmissions in a second VDSL system